

What is claimed is:

1. A magnetically induced super resolution-type
magneto-optical recording medium comprising, on a light-
transmitting substrate, at least a recording layer for
recording and retaining information therein, and a read-
out layer for copying therein the information retained in
said recording layer during reproduction of the
information, wherein:

an exchange-coupling breaking layer is disposed
between said recording layer and said read-out layer, and
said exchange-coupling breaking layer comprises a
layer of a nitride of either one of GdFeCo or TbFeCo.

2. A magnetically induced super resolution-type
magneto-optical recording medium comprising, on a light-
transmitting substrate, at least a recording layer for
recording and retaining information therein, a read-out
layer for copying therein the information retained in
said recording layer during reproduction of the
information, and a read-out auxiliary layer, wherein:

an exchange-coupling breaking layer is disposed
between said read-out auxiliary layer and said recording
layer, and

said exchange-coupling breaking layer comprises a
layer of a nitride of either one of GdFe or TbFeCo.

3. The magneto-optical recording medium according to
claim 1, wherein said exchange-coupling breaking layer
has a thickness in a range of from a one-atom layer
thickness to 100 Å.

4. The magneto-optical recording medium according to claim 2, wherein said exchange-coupling breaking layer has a thickness in a range of from a one-atom layer
5 thickness to 100 Å.

5. A process for manufacturing a magnetically induced super resolution-type magneto-optical recording medium which comprises, on a light-transmitting substrate, at
10 least a recording layer for recording and retaining information therein, and a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, said process comprising the steps of:
15 forming said read-out layer;
forming, on said read-out layer, an exchange-coupling breaking layer comprising a layer of a nitride of GdFeCo by sputtering; and
20 forming said recording layer on said exchange-coupling breaking layer, wherein the step of forming said exchange-coupling breaking layer is conducted by, immediately before completion of said step for forming the read-out layer, introducing N₂ into a chamber used for forming said read-out layer so that a layer of a
25 nitride of GdFeCo having a thickness of a one-atom layer thickness or more is formed in the chamber.

6. A process for manufacturing a magnetically induced super resolution-type magneto-optical recording medium
30 which comprises, on a light-transmitting substrate, at least a recording layer for recording and retaining

information therein, and a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, said process comprising the steps of:

5 forming said read-out layer;

forming, on said read-out layer, an exchange-coupling breaking layer comprising a layer of a nitride of TbFeCo by sputtering; and

10 forming said recording layer on said exchange-coupling breaking layer, wherein the step of forming said exchange-coupling breaking layer is conducted by, immediately before completion of said step for forming the read-out layer, introducing N₂ into a chamber used for forming said read-out layer so that a layer of a
15 nitride of TbFeCo having a thickness of a one-atom layer thickness or more is formed in the chamber.

7. A process for manufacturing a magnetically induced super resolution-type magneto-optical recording medium
20 which comprises, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, and a read-out auxiliary
25 layer, said process comprising the steps of:

forming said read-out layer;

forming said read-out auxiliary layer by sputtering;

forming, on said read-out auxiliary layer, an exchange-coupling breaking layer comprising a layer of a
30 nitride of GdFe by sputtering; and

forming said recording layer on said exchange-

coupling breaking layer, wherein the step of forming said exchange-coupling breaking layer is conducted by, immediately before completion of said step for forming the read-out auxiliary layer by sputtering, introducing
5 N₂ into a chamber used for forming said read-out auxiliary layer so that a layer of a nitride of GdFe having a thickness of a one-atom layer thickness or more is formed in the chamber.

10 8. A process for manufacturing a magnetically induced super resolution-type magneto-optical recording medium which comprises, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, a read-out layer for copying therein
15 the information retained in said recording layer during reproduction of the information, and a read-out auxiliary layer, said process comprising the steps of:

forming said read-out layer;

forming said read-out auxiliary layer by sputtering;

20 forming, on said read-out auxiliary layer, an exchange-coupling breaking layer comprising a layer of a nitride of TbFeCo by sputtering; and

forming said recording layer on said exchange-coupling breaking layer, wherein the step of forming said
25 exchange-coupling breaking layer is conducted by, immediately after start of said step for forming the recording layer by sputtering, introducing N₂ into a chamber used for forming said recording layer so that a layer of a nitride of TbFeCo having a thickness of a one-
30 atom layer thickness or more is formed in the chamber.